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ABSTRACT

This digest examines data on video game use by children, explains ratings of video game violence, and reviews research on the effects of video games on children and adolescents. A recent study of seventh and eighth graders found that 65% of males and 57% of females played 1 to 6 hours of video games at home per week, and 38% of males and 16% of females played 1 to 2 hours of games per week at arcades. This study also found that, among five categories of video games, games that involved fantasy violence and sports games (many with violent themes) were most preferred by the students surveyed. Systems for rating the violent content of video games have been developed by the Sega and Nintendo companies, and by the National Coalition on Television Violence (NCTV). A 1989 survey of video games conducted by NCTV found that 71% of the games received 1 of 3 violent ratings. Contrary to early research, recent studies on the effects of video games on children have found connections between children's playing violent games and later aggressive behavior. A research review done by NCTV in 1990 found that 9 of 12 studies on the impact of violent games on children reported harmful effects. Some professionals speculate that performing violent acts in video games may be more conducive to children's aggression than passively watching violent acts on television. Another problem cited by critics of video games is that these games stress autonomous rather than cooperative action. Furthermore, children's attitudes toward gender roles may be influenced by video games, in which women are usually cast as persons who are acted upon, rather than as initiators of, action. Given the inconclusive nature of research, recommendations concerning video games must be conservative. (BC)

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Video Games and Children

Bernard Cesarone

Video games were first introduced in the 1970s. By the end of that decade they had become a preferred childhood leisure activity, and adults responded with concern about the possible ill effects of the games on children. Early research on these effects was inconclusive. However, a resurgence in video game sales that began in the late 1980s after the introduction of the Nintendo system has renewed interest in examining the effects of video games.

Some research suggests that playing video games may affect some children's physical functioning. Effects range from triggering epileptic seizures to causing heart rate and blood pressure changes. Serious adverse physical effects, however, are transient or limited to a small number of players. Research has also identified benefits associated with creative and prosocial uses of video games, as in physical rehabilitation and oncology (Funk, 1993). Proponents of video games suggest that they may be a friendly way of introducing children to computers, and may increase children's hand-eye coordination and attention to detail.

Video Game Use by Children

Recent studies of television watching by children have included measures of the time children spend playing video games. In 1967, the average sixth-grader watched 2.8 hours of television per day. Data from 1983 indicated that sixth-graders watched 4.7 hours of television per day, and spent some additional time playing video games.

A recent study (Funk, 1993) examined video game playing among 357 seventh and eighth grade students. The adolescents were asked to identify their preference among five categories of video games. The two most preferred categories were games that involved fantasy violence, preferred by almost 32% of subjects; and sports games, some of which contained violent subthemes, which were preferred by more than 29%. Nearly 20% of the students expressed a preference for games with a general entertainment theme, while another 17% favored games that involved human violence. Fewer than 2% of the adolescents preferred games with educational content.

The study found that approximately 36% of male students played video games at home for 1 to 2 hours per week; 29% played 3 to 6 hours; and 12 percent did not play at all. Among female students who played video games at home, approximately 42% played 1 to 2 hours and 15% played 3 to 6 hours per week. Nearly 37% of females did not play any video games. The balance of subjects played more than 6 hours per week. Results also indicated that 38% of males and 16% of females played 1 to 2 hours of video games per week in arcades; and that 53% of males and 81% of females did not play video games in arcades.

Rating Video Game Violence

Ratings of video game violence have developed as an extension of ratings of television violence. Among those organizations that have attempted to rate television violence, the National Coalition on Television Violence (NCTV) has also developed a system to rate the violent content of video games. The NCTV system contains ratings that range from XUnfit and XV (highly violent) to PG and G ratings. Between summer and Christmas of 1989, NCTV surveyed 176 Nintendo video games. Among the games surveyed, 11.4% received the XUnfit rating. Another 44.3% and 15.3% received the other violent ratings of XV and RV, respectively. A total of 20% of games received a PG or G rating (NCTV, 1990).

The Sega company, which manufactures video games, has developed a system for rating its own games as appropriate for general, mature, or adult audiences, which it would like to see adopted by the video game industry as a whole. The Nintendo company, in rating its games, follows standards modeled on the system used by the Motion Picture Association of America.

A problem shared by those who rate violence in television and video games is that the definition of violence is necessarily subjective. Given this subjectivity, raters have attempted to assess antisocial violence more accurately by ranking violent acts according to severity, noting the context in which violent acts occur, and considering the overall message as pro- or anti-violence. However, the factor of context is typically missing in video games. There are no grey areas in the behavior of game characters, and players are rarely required to reflect or make contextual judgments (Provenzo, 1992).

Effects of Violence in Video Games

The NCTV claims that there has been a steady increase in the number of video games with violent themes. Games rated as extremely violent increased from 53% in 1985 to 82% in 1988. A 1988 survey indicated that manufacturers

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were titling their games with increasingly violent titles (NCTV, 1990). Another survey found that 40 of the 47 top-rated Nintendo video games had violence as a theme.

An early study on the effects of video games on children found that playing video games had more positive effects on children than watching television. A conference sponsored by Atari at Harvard University in 1983 presented preliminary data which failed to identify ill effects. More recent research, however, has begun to find connections between children's playing of violent video games and later aggressive behavior. A research review done by NCTV (1990) found that 9 of 12 research studies on the impact of violent video games on normal children and adolescents reported harmful effects. In general, while video game playing has not been implicated as a direct cause of severe psychopathology, research suggests that there is a short-term relationship between playing violent games and increased aggressive behavior in younger children (Funk, 1993).

Because it is likely that there is some similarity in the effect of viewing violent television programs and playing violent video games on individuals' aggressive behavior, those concerned with the effects of video games on children should take note of television research. The consensus among researchers on television violence is that there is a measurable increase of from 3% to 15% in individuals' aggressive behavior after watching violent television. A recent report of the American Psychological Association claimed that research demonstrates a correlation between viewing and aggressive behavior (Clark, 1993).

Effects of Other Characteristics of Video Games

Some adults believe that video games offer benefits over the passive medium of television. Among mental health professionals, there are those who maintain that in playing video games, certain children can develop a sense of proficiency which they might not otherwise achieve. However, other authorities speculate that performing violent actions in video games may be more conducive to children's aggression than passively watching violent acts on television. According to this view, the more children practice violence acts, the more likely they are to perform violent acts (Clark, 1993). Some educational professionals, while allowing that video games permit children to engage in a somewhat creative dialogue, maintain that this engagement is highly constrained compared to other activities, such as creative writing (Provenzo, 1992).

Another problem seen by critics of video games is that the games stress autonomous action rather than cooperation. A common game scenario is that of an anonymous character performing an aggressive act against an anonymous enemy. One study (Provenzo, 1992) found that each of the top 10 Nintendo video games was based on a theme of an autonomous individual working alone against an evil force. The world of video games has little sense of community and few team players. Also, most video games do not allow play by more than one player at a time.

The social content of video games may influence children's attitudes toward gender roles. In the Nintendo games, women are usually cast as persons who are acted upon rather than as initiators of action; in extreme cases, they are depicted as victims. One study (Provenzo, 1992) found that the covers of the 47 most popular Nintendo games depicted a total of 115 male and 9 female characters; among these characters, 20 of the males struck a dominant pose while none of the females did. Thirteen of the 47 games were based on a scenario in which a woman is kidnapped or has to be rescued.

Studies have indicated that males play video games more frequently than females. Television program producers and video game manufacturers may produce violent shows and games for this audience. This demand for violence may not arise because of an innate male desire to witness violence, but because males are looking for strong role models, which they find in these shows and games (Clark, 1993).

Conclusion

Given inconclusive research, recommendations concerning video games must be conservative. According to researcher Jeanne Funk (1993), a ban on video games is

> probably not ... in the child's best interests. Limiting playing time and monitoring game selection according to developmental level and game content may be as important as similar parental management of television privileges. Parents and professionals should also seek creative ways to increase the acceptance, popularity, and availability of games that are relatively prosocial, educational, and fun. (p.89)

For More Information

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